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ABSTRACT

The health care environment is undergoing significant change in the United States. There is constant talk of a health care crisis and the need for systemic reform. Part of this reform involves the education of the individual so that he or she can monitor his or her own health. The need for expanded health education produces implications for communication educators. G. Kreps and B. Thornton have noted that communication is the "primary tool that health educators use in disseminating relevant and persuasive health information." Much of this dissemination occurs in public presentations, which require strong presentation skills and techniques. Kreps has argued that "preparation and use of effective visual aids and graphics in presentations to clearly illustrate complex health topics will enhance health education efforts." Improved comprehension, retention and persuasive impact have been correlated with the use of visual aids. M. Osborn and S. Osborn have summarized the advantages of audiovisual aids: (1) they enhance understanding; (2) they add authenticity; (3) they add variety; (4) they help the presentation have lasting impact; and (5) they build the presenter's ethos as a speaker. Kreps and Thorton among others have provided advice for health care presenters that speech communication educators should try to pass on to their students, especially those in the health care professions. (Contains 29 references.) (TB)

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"Workplace to Workplace--Training Health Educators in the Use of Audiovisual Aids"

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> "Seeing...most of all the senses makes us know and brings to light many differences between things"
>
> Aristotle

The health care environment is undergoing significant change in the United States. There is constant talk of a health care crisis and the need for systemic reform. Everyone seems to be concerned about the availability and cost of health care. Those concerns have generated an enormous demand for health information resources. Indeed, the demand for such resources has grown at an unprecedented rate (Philipp, Hughes, Mackley, & Fletcher, 1988; Sobel, 1987; Lieberman, 1992). This demand for health education has produced a corresponding growth in all forms of health education.

Much of health education is directed at improving the individual's ability to self-monitor their health status and to reduce health-related risks and costs. The values associated with such increased individual self-care and preventive action cannot be overstated. Providing health education to consumers enables those individuals who can best use such information to reduce health risks and to increase the effectiveness of health care (Kreps, 1988; Jones, 1986). Liberman (1992) has summarized some of the benefits of health information and education in this way:

> Health education resources can encourage people to (a) identify potential problems early and see their physician at the first sign of trouble, (b) get inoculations to prevent disease, (c) schedule follow-up appointments with their

> doctor when certain medications have been prescribed, and (d) have physical examinations and screening tests--such as those for detecting early signs of cancer--at intervals appropriate for such individual's health history and health risks. (p. 213)

Indeed, health education is often designed to assure that such important information is shared between the medical community and consumers. Kreps (1990) notes: "Health education efforts are also designed to narrow the information gap between health-care providers and the public by keeping the public informed about pertinent health-risk prevention and health-care treatment issues" (p. 190).

Health information and health education play a crucial role in the preventive approach to health care as they enable individuals to take charge of their own health (Kreps, & Thornton, 1992). Health information and health education provide the fundamental resources which consumers need to gain health maintenance competencies (Arntson, 1989). "Health information is an essential ingredient in health-risk prevention in that information is needed to educate health care providers and the public about potential health risks, state-of-the-art prevention and treatment techniques, as well as how to best implement appropriate strategies for minimizing health risks" (Kreps, 1990, p. 193). It only makes sense that health education could provide information that enables individuals to improve their exercise regimens, to stop smoking, or to take other preventive measures which produce net health benefits.

There is abundant evidence to demonstrate that prevention and other health education induced outcomes do, indeed, produce benefits. Lieberman (1992) has summarized these benefits by concluding that "when health information is made available, there are people who use it, appreciate it, gain confidence in their ability to treat minor ailments at home, reduce their

reliance on inappropriate clinical visits, and therefore spend less money on medical care" (p. 214). Empirical research supports each of the benefits cited by Liberman.

Experimental research has demonstrated that health education enables consumers to better assess their own medical status and to avoid unnecessary visits to a health-care provider. "Clinical trials have demonstrated that health education can reduce the number of inappropriate medical visits" (Lieberman, 1992, p. 213). Several studies have demonstrated that members of health plans who were provided with convenient access to health education improved both their ability and willingness to care for themselves, producing a net reduction in clinical visits for common ailments such as colds and flu (Estrabrook, 1979; Levin, Katz, & Holtz, 1976; Lorig, Kraine, Byron, Brown & Richardson, 1985; Stergachis, 1986; Zapka & Averillo, 1979).

Studies have also demonstrated that health education can produce important perceptual and attitudinal changes. Health education often makes patients feel better about the quality of the care which they receive. Indeed, a number of studies have found that higher satisfaction with health care was reported by individuals who had received some form of health education (Green & More, 1980; Greenfield, Kaplan, & Ware, 1985; Hughes, 1988; Krantz, Baum & Von Wideman, 1980).

As unnecessary clinical visits decline and self-care improves, health education also contributes to financial savings. A cost-benefit analysis found that self-caring individuals spent over a quarter less on hospital bills and nearly 20% less on physician services than those who did not engage in appropriate self-care (Ferguson, 1989). "By improving attitudes and health behaviors", notes Lieberman (1992), "education efforts ultimately help to reduce medical costs" (p. 213).

The benefits of health education are quite apparent. Individuals learn to perform better self-care. Unnecessary clinical visits decline, and satisfaction with care received improves. Additionally, costs are reduced for those who have become empowered, self--carers as a result of health education. It should not be surprising that a panel of experts serving on the U.S. Preventive Services Task Force (1989) has recommended that consumers should receive more health education.

The need for expanded health education produces implications for communication educators. Kreps and Thronton (1992) have noted: "Communication is the primary tool that health educators use in disseminating relevant and persuasive health information" (p. 122). Communication serves as a vehicle for the transfer of health-related information from health care providers to consumers. Communication enables health educators to present information regarding potential health risks, treatment and care options, and other relevant data to the public. Kreps (1990) has suggested that: "Human communication processes enable communicators to gather and interpret pertinent environmental information providing rationale, context, and direction for interpersonal coorientation and cooperation" (p. 188). Cassata (1980) has also suggested that communication is essential to the sharing of health information between providers and consumers.

The communicative function of health education can take place in both informal and formal settings. Informal settings are those typical to daily interpersonal interaction--discussions at the office, chatting with friends and family, and so forth. Formal settings include the medical office and classroom, where trained health educators convey information to the public. Kreps (1990) has described formal health education in this manner: "Formal health education is

provided to consumers during patient education efforts by many different health-care specialists and practitioners (such as doctors, nurses, pharmacists, dentists, and therapists) when these professionals share relevant health information with their clients" (p. 189). Formal health education may take the form of close interpersonal interactions between a doctor and patient, it could be mediated by a broadcast entity, or it might take place in a public address forum.

"Health care providers and health educators often use public presentations to personally disseminate relevant health information" (Kreps & Thronton, 1992). Health educators may have to play the role of classroom lecturer or public speaker in some other context. A health educator may encounter a number of occasions to play such a role. Kreps and Thronton (1992) note: "Public presentations take many forms. Oral presentations can consist of anything from speeches given to laypersons for health education purposes to interprofessional lectures from one health care provider to colleagues for conveying technical information" (p. 126). In other words, health educators may find that they must make public presentations in a variety of contexts.

If one accepts the fact that health educators might often find themselves making oral presentations then it would seem to follow that those educators should be trained in good presentational skills and techniques. Kreps (1990) has suggested that health education must strive toward producing practitioners with "enhanced abilities to communicate effectively in health-care situations" (p. 199). This certainly implies that adequate training in oral presentation skills should be made available to health educators. Such training should include direction in all aspects of public presentation. Health educators should be taught to analyze different types of audiences and speaking occasions, to employ effective eye contact and gestures, and to

properly use audiovisual aids. Indeed, Kreps (1990) has argued that "preparation and use of effective visual aids and graphics in presentations to clearly illustrate complex health topics will enhance health education efforts" (p. 196).

Some may ask why would training in audiovisual aids be desirable or beneficial for health educators? The old saying that "a single picture is worth a thousand words" is instructive here. The addition of a visual component adds a great deal to oral presentations. A good many speech communication scholars (e.g. Vasile & Mintz, 1993; Lucas, 1992; Bradley, 1974; Osborn & Osborn, 1992; Verderhar, 1994) agree that visual aids make messages more impressive and memorable. This is due to the fact that the involvement of additional sense--seeing as well as hearing, in this case--improves the learning process. Vasile and Mintz (1993) explain: "Specialists in modern educational psychology agree on at least one principle: the more senses involved in learning, the greater the learning" (p. 247). Indeed, empirical research has demonstrated that the addition of a visual component to an oral presentation improves the learning and retention efforts of the audience. One study, for example, found that over 80% of what we learn comes through our eyes, and only 11% through our ears (Montgomery, 1979).

Improvements in learning and retention are not the only benefits associated with the use of visual aids. Both improved comprehension and persuasive impact have been correlated with the use of visual aids (Ehninger, Granbeck, McKerrow, & Monroe, 1982). Ross (1983) has suggested that audiovisual aids "are used to help make a subject clear, to build interest, and reinforce the message. On all counts they are valuable to the speaker" (p. 220). One could review a variety of speech communication texts to locate benefits associated with the

employment of audiovisual aids. Osborn and Osborn (1992) have summarized the advantages of audiovisual aids to a speaker in this fashion:

1. Visual aids enhance understanding. Sometimes visual aids are superior to words in conveying meaning. It is easier to give directions if you can trace the route on a map. Similarly, when you are describing the auditory qualities of stereo-speaker systems, it can be more effective to let audiences actually hear the differences.

2. Visual aids add authenticity. When you show listeners the points you are making, you do more than just clarify your message. You authenticate or prove it....If audiences can actually hear the difference in stereo systems you have been describing, they are more likely to be convinced that one is better than the other. When you show them the problem you are talking about, they should more readily accept your solution.

3. Visual aids add variety. Too much of a good thing, even a well-designed fabric of words, can get tiresome. The use of visual aids at critical points in a speech adds variety. Visual aids may even help to improve your presentational skills....

4. Visual aids help your speech have lasting impact. Because they are more concrete, visual aids are easier to remember than words alone. A photograph of a hungry child may stick in our memory

increasing the influence of a speech urging charitable contributions. Or we may remember the bright red markings signaling dangerous places on a map.

5. Visual aids can help build your ethos as a speaker. A neat, attractive visual aid reflects your commitment to communicate. It tells the audience you took time in the preparation of your speech...(pp. 214-215).

Thus, the benefits associated with the use of audiovisual aids can be substantial.

The benefits of audiovisual aids can easily be produced in the health education context. Indeed, it has been suggested that visual aids are useful in virtually every presentational context. Verderber (1994) argues that: "As a result of their impact, visual aids are likely to be appropriate for any speech" (p. 180). Lucas (1992) has offered this extensive narrative, which is an example of the employment of visual aids by a health educator, to illustrate the general value of such devices:

> Joan Blake is a nutritionist with Medical Case Affiliates in Boston. An excellent public speaker, she is often hired by corporations to talk to employees about how to improve their health by good eating habits. On this particular day she is speaking to a group in Sudbury, Massachusetts, about reducing the amount of fat in their diets.
>
> To illustrate her point, she pulls out five brightly colored wooden sticks, "If I were to puree fish in a food processor, then pour the mixture into a test tube, this is what it would look like", she says, holding up a stick painted in three

colors. "The blue is water, the red is protein, and the yellow--well watch out for the yellow. That's fat". The "fish stick" she is holding up has a fair amount of red, lots of blue, and only a think band of yellow. Blake then holds up a second stick with slightly more yellow. "This is chicken", she says. "See why nutritionists recommend fish and poultry?"

A third stick follows. "Here's lean hamburger", Blake says. "What's happening?" It's obvious that the yellow portion of the stick is much larger than with the sticks representing fish and chicken. "You sure that's lean?", someone asks aghast.

Blake brandishes another stick, a full third of it yellow. She pauses for effect. "Pork chop". The audience begins to groan, but she cuts them off. "Ready? Here comes steak"--and she lifts a stick half yellow. "Oh, my God, say you're kidding", comes the response. (p. 258)

This scenario clearly demonstrates the value of visual aids in the context of health education.

Given the value associated with audiovisual aids, one might ask "What advice is available to health educators regarding the use of such devices?" Kreps and Thronton (1992) have noted that: "movie or overhead projectors, graphs and charts, tape or photograph recordings, or an easel are sometimes useful tools for the speaker" in the health education context (p. 131). They go on to suggest three fundamental criteria for the use of audiovisual aids by health educators:

1. The aid should be important to the speech. It should specifically amplify the point being made in the speech. It should not be distracting.

2. The aid should be seen only as an assisting device. The point being made should stand without an aid, but the better because of it.

3. Aids should be visible, audible, and in working order. (p. 132)

Kreps and Thronton elaborate at some length on the need for being sure equipment is "in working order", and conclude: "One invaluable rule is to check out the equipment before you decide to use it and once again just before the presentation you should practice the speech with the aids in the very area in which the speech is to take place, whenever possible" (p. 132).

Kreps and Thronton (1992) offer health educators some additional advice on the use of audiovisual aids: "Aids should be simple and clear. Complicated displays can distract the audience from the major points being made. If the aid is not neat and clear, the audience will start worrying about the speaker's credibility" (p. 132). They conclude their discussion of the use of audiovisual aids in the health education context with detailed information regarding the use of handouts. They note:

> The handout is often used as an aid in medically related presentations. While it can be invaluable in presenting detailed and complex material or in summarizing the presentation, care should be taken in handing it out before the speech. Often it will distract the audience. One exception to this is an outline which, when given at the beginning of a complex presentation, can simplify information for the listener. (p. 132)

This advice closes the discussion of audiovisual aids for Kreps and Thronton.

The information regarding the use of audiovisual aids in the health education context provided by Kreps and Thronton is quite good. It suggests that certain audiovisual aids might be of use to health educators. It offers important criteria for the use of such devices. It details information regarding the use of equipment by speakers, and the use of handouts as a visual supplement to speeches. It also touches upon the importance of preparation, simplicity, and practice. Health educators should feel fortunate that such pertinent advice is available. Unfortunately, this is virtually the only health education specific advice available regarding the employment of audiovisual aids.

Speech communication educators should provide more specific advice regarding the use of audiovisual aids to health educators. The substantial societal benefits of health education may be enhanced if the information involved is conveyed to the public in exciting and interesting ways, which would include the use of audiovisual aids. The data regarding learning and retention as well as the other advantages associated with audiovisual aids clearly suggests that they could contribute effectively to presentations by health educators. Speech communication educators can help make such use more productive, as Osborn and Osborn (1992) note: "the skillful use of visual aids takes considerable creativity, planning and preparation" (p. 215).

Speech communication educators might start by explaining the different types of visual aids which one might employ in an oral presentation, with illustrations specific to the health education context. Speech communication scholars have classified the various types of audiovisual aids in a large number of ways (See e.g. Lucas, 1992; Ross, 1983; Barrett, 1977; Verderber, 1994; Vasile & Mintz, 1993). The classification scheme employed by Osborn and

Osborn (1992) is, however, typical. They say that the most frequently employed kinds of audiovisual aids are people, subjects, models, graphics, photographs and pictures.

People, including the speaker, inherently serve as audiovisual aids. The speaker's gestures and body movement convey information to an audience. Other people, such as volunteers from the audience, may be employed in various types of demonstrations. A health educator might wish to demonstrate the most efficient forms of aerobic exercise. The speaker could demonstrate such exercises him or herself, or ask someone to assist in the performance of the exercises during an oral presentation.

Subjects or objects are generally actual items that a speaker uses to supplement information in a presentation. Most of us used an object during our very first oral presentation when we brought our favorite toy or a pet to "show and tell". A friend has recounted to me how an object was actually employed as a visual aid by a health educator. He was attending a clinic on smoking cessation several years ago. Much of the material seemed dry and boring, until one of the speakers displayed a blackened lung that had been removed from a smoker. My friend says that when the speaker displayed the lung that he knew he had already smoked his last cigarette.

Models are replicas of unavailable or larger objects. Many of us have seen speeches concerning an airplane or train trip, where the speaker has employed a model of the vehicle to help dramatize the speech and to help make a point. Health educators could employ models in a similar way. A health educator might, for example, use a model of a human heart to demonstrate how fat and cholesterol effect circulation and increase the risk of heart disease and stroke.

Graphics are representational aids which are prepared for use in a presentation. Graphics could include sketches, graphs, maps, charts, or textual graphics. Health educators could employ graphics to convey a great deal of information to the public. Charts and graphics that display the effect on growth of smoking or poor dietary habits, could be used to supplement a presentation identifying the negative impacts of risk factors. Other charts and graphs could be designed to display the economic costs of alcohol and drug abuse, or the consequences of unchecked population growth. Textual graphics which display important key terms to an audience--"nicotine", "risk factor", or "blood pressure", for example--could help emphasize vital information in a presentation by a health educator.

Photographs and pictures are the most obvious types of visual aids which one might employ. In daily conversation we share pictures and photographs of our loved ones when talking about them with friends or others. A health educator might find it valuable to display still photographs or a videotaped segment of how to properly examine the feet of diabetics or how to perform a self-examination for the early detection of breast cancer.

Speech communication educators could supplement any discussion of the types or kinds of audiovisual aids available to health educators for oral presentations with information regarding the benefits and problems associated with the use of each. In a discussion of graphics, for example, it would be useful to note that "a well-designed graph can help make statistical information easier for listeners to comprehend" (Osborn & Osborn, 1992, p. 219). Such information as the variance in per capita smoking rates can be more easily presented with the use of a bar or pie graph, then words alone. The "down side" of some of the various types of audiovisual aids should also be made apparent. For example, a single picture may be worth a

thousand words, but it may also be costly to a speaker. Pictures and photographs "frequently include detail that is not relevant to the speech, so that they contain built-in distractions" (Osborn & Osborn, 1992, p. 224). A photograph or videotape of an EMS call might, for example, contain other vehicles and action which serve as such "built-in distractions".

Speech communication educators could also facilitate the efficient employment of audiovisual aids by health educators by providing information regarding the various ways of presenting the aids. Osborn and Osborn (1992) note: "Chalkboards, flip charts, poster board, handouts, projections, films, videotapes, audiotapes, and computer generated materials are often used as ways to present visual aids" (p. 225).

The discussion that Kreps and Thronton offered regarding the use of handouts is a good illustration of the type of material that could be conveyed to health educators regarding the various presentational methods available when utilizing audiovisual aids for a speech. Detailed information regarding each of the methods of presentation available would be useful. Health educators could be told, for example, that the chalkboard offers the primary advantage of availability and accessibility, but suffers from becoming easily cluttered. It might also be useful to explain to health educators that audiotapes could be very effective in demonstrating the different types of sirens used by emergency vehicles, but that great care must be taken to properly adjust their volume for an audience.

Information regarding the planning and preparation of audiovisual aid use would also be valuable to health educators. Osborn and Osborn (1992) have, for examples, summarized the following suggestions for planning and preparing audiovisual aids:

1. Be certain your visual aid enhances the meaning or impact of your speech.
2. Limit the number of aids you will use. Keep the focus on your message.
3. Make a rough draft of your visual aid to check out how well it works.
4. Be sure your aid is simple, balanced in design, and easy to see from the back of the room.
5. Use color in your visual aid to increase effectiveness.
6. Prepare a neat visual aid. A sloppy one can damage your credibility and reduce the effectiveness of your speech. (p. 235)

Each of these suggestions could be important to health educators. They need to assess whether or not a model heart or pack of cigarettes would actually enhance the impact of a speech. They need to avoid the temptation to employ a chart or graph for every single statistic on diet, exercise, or other risk factors for disease. They need to make a draft of a poster on AIDS and safe sex to see if it will work well. They need to make sure that a videotape of a new surgical procedure is simplified and clearly visible for a presentation. They need to use bright, visual red to help stress the importance of donating blood. And, they need to ensure that a model of a heart or kidney is constructed without distracting adhesives or other features.

Speech communication educators can provide health educators information regarding the use of audiovisual aids at the elementary and secondary school level, the collegiate and pre-professional level, the graduate and professional level, and in the context of continuing

education. "Implementation of health communication curricula at each of these educational levels can help maximize health care consumers' and providers' development of health communication competencies" (Kreps, 1990, p. 200). In other words, the knowledge available in the speech communication workplace could be employed to produce benefits in the health education workplace.

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